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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of

Allocation of Spectrum Below  
5 GHz Transferred From  
Federal Government Use

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ET Docket No. 94-32

To: The Commission

REPLY COMMENTS

ALCATEL NETWORK SYSTEMS, INC.

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Its Attorneys

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## TABLE OF CONTENTS

SUMMARY .....	2
THE COMMISSION ABDICATES ITS STATUTORY RESPONSIBILITY TO SPECIFY FREQUENCY ASSIGNMENTS .....	4
THE COMMISSION CANNOT USE AUCTIONS TO ALLOCATE SPECTRUM .....	7
RULE MAKINGS ARE NEEDED TO DETERMINE USE OF THE 4 GHz BAND .....	10
CONCLUSION .....	11

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**REPLY COMMENTS**

Pursuant to Section 1.415 of the Commission's Rules,<sup>1</sup> Alcatel Network Systems, Inc. ("ANS"),<sup>2</sup> by its attorneys, hereby replies to certain of the comments on the Commission's above-captioned Notice of Proposed Rule Making (FCC 94-272, released November 8, 1994) ("NPRM").<sup>3</sup>

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<sup>1</sup>47 C.F.R. Section 1.415 (1994).

<sup>2</sup>ANS is a wholly-owned subsidiary of Alcatel Alsthom ("Alcatel"), one of the world's largest corporations (with annual sales in excess of \$30 billion) and the world's largest manufacturer and supplier of telecommunications equipment. In particular, Alcatel is the world's largest independent manufacturer and supplier of microwave radios. Formerly Collins Radio and a division of Rockwell International, ANS, with over \$500 million in annual sales, is a world leader in manufacturing microwave and light wave transmission systems. ANS' equipment is used for a wide range of services, including short, medium and long-haul voice, video and data transmission. Its microwave customers include all the Bell Operating Companies, most major independent telephone companies, cellular operators, power and other utility companies, oil companies, railroads, industrial companies, and state and local government agencies.

<sup>3</sup>The deadline for filing reply comments in this proceeding was extended to January 6, 1995. Order, DA 94-1591 (released Dec. 28, 1994). Attached hereto, as Appendix A, is a list of the commenters addressed herein and the abbreviation for each used in this text.

## SUMMARY

In the Omnibus Budget Reconciliation Act of 1993 ("OBRA"),<sup>4</sup> Congress required that the Secretary of Commerce identify at least 200 MHz of federal spectrum to be reallocated for private sector use.<sup>5</sup> The Department of Commerce identified what federal spectrum should be reallocated and proposed a time table for completing the transfer.<sup>6</sup>

Consistent with this schedule, the Department of Commerce identified the 2390-2400 MHz, 2402-2417 MHz and 4660-4685 MHz bands as the first 50 MHz to be reallocated.<sup>7</sup> The Commission, in the NPRM, decided that this initial 50 MHz should not be subject to rule makings for specifying particular uses on the individual bands. Instead, the Commission proposes allocating the spectrum to generic "Fixed" and "Mobile" categories, and allowing the highest bidders for frequency blocks to select how the band would be used.<sup>8</sup>

This approach is fundamentally flawed. Service in these bands would be a "free-for-all" because technical and operating rules are not proposed. ANS proves in its comments that chaos will result. Licensees will not be assured protection against harmful interference from non-compatible adjacent or co-channel licensees. Radio development and production for these bands will be stillborn as manufacturers will not know how they will be occupied.<sup>9</sup>

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<sup>4</sup>Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI, Section 6001, 107 Stat. 312 (approved Aug. 10, 1993).

<sup>5</sup>See National Telecommunications and Information Administration Organization Act, Pub. L. No. 102-538, 106 Stat. 3533, codified at 47 USC Sections 900 et seq.

<sup>6</sup>Preliminary Spectrum Allocation Report, U.S. Dept. of Commerce, NTIA Special Publication 94-27 (Feb. 1994) at Table 5-4 ("Preliminary Report").

<sup>7</sup>Preliminary Report at Table 5-4.

<sup>8</sup>NPRM at para. 9.

<sup>9</sup>ANS at 2-5.

ANS is not alone. The record of this proceeding condemns the Commission's approach. The parties almost unanimously oppose its decision to use competitive bidding as a surrogate for rule making to allocate specific frequency blocks for specific services.<sup>10</sup> UTC rejects the Commission's proposal because it "is inconsistent with sound spectrum management and the provisions of the Communications Act of 1934, as amended."<sup>11</sup> Motorola chastises the Commission's proposal because it "contravene[s]" the agency's competitive bidding authority and "impermissibly substitute[s] the marketplace for the Commission's independent obligation to make allocations that advance the public interests."<sup>12</sup> TIA "believes that there are ways of fostering innovation without bypassing rulemaking proceedings to evaluate the competing needs of various radio services" and without "creat[ing] dilemmas for manufacturers of radio equipment, which will directly affect service providers' ability to bring new radio capabilities to public and private users."<sup>13</sup> ITA impugns the Commission's "open market" proposal as an "arbitrary and ill-conceived attempt to skew consumers' choices and distort" the allocation process.<sup>14</sup>

ANS is one of several parties objecting to the Commission's proposed open allocation for the 4 GHz band. Contrary to the Commission's assessment that its ET Docket No. 92-9 adequately addressed the needs of displaced fixed microwave users, ANS, API and Pacific Bell demonstrate, in their comments, that: (i) these needs have not been met; (ii) the 4 GHz band (including the 4660-4685 MHz band) is viable for this service; (iii) more than 25 MHz in the 4 GHz band must be

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<sup>10</sup>UTC at 3-9; AAR at 6-7; API at 12; TIA at 2-3; ITA at 4-12; MRFAC at 3-5; Motorola at 1-2; Compaq at 12-15; FIT at 2; Continental at 2; APCO at 5; LA Sheriff at 6; Norand at 11; AT&T at 4; In-Flight at 5-6; ATN at 2; Metricom at 10.

<sup>11</sup>UTC at 3.

<sup>12</sup>Motorola at 1-2.

<sup>13</sup>TIA at 2.

<sup>14</sup>ITA at 4.

reallocated for the required paired channels; and (iv) the Commission has not justified why its previous recommendation, that additional federal spectrum in the 4 GHz band be transferred for private sector users to accommodate such needs, has been ignored in the NPRM.<sup>15</sup> Instituting a rule making to determine if the 4 GHz band should be used for fixed microwave service, or for any of the other services proposed in comments on the NPRM, would address these issues and thus would be in the public interest.

On the basis of this record, a major overhaul of the Commission's "open market," auction-driven, allocation scheme for the newly available federal spectrum clearly is in order. The Commission must abandon this scheme and it must conduct service-specific rule makings to determine what uses will be available on the new bands and what technical and operating standards should govern such uses. Otherwise, given the high level of opposition to its proposal, the Commission will have a battle on its hands that could delay availability of the new spectrum indefinitely.

#### **THE COMMISSION ABDICATES ITS STATUTORY RESPONSIBILITY TO SPECIFY FREQUENCY ASSIGNMENTS**

Under Section 303(c) of the Communications Act of 1934, as amended (the "Act"), Congress is obligated to:

[a]ssign bands of frequencies to the various classes of stations, and assign frequencies for each individual station and determine the power which each station shall use and the time during which it may operate.<sup>16</sup>

This system has worked well:

all . . . spectrum is subject to very specific requirements and the emissions characteristics on specific channels is uniform across the United States. To date, this service-specific block allocation framework has worked very well and has been replicated by countless other countries[.]<sup>17</sup>

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<sup>15</sup>ANS at 7-10; API at 9; Pacific Bell at 2.

<sup>16</sup>47 USC Section 303(c) (1994).

<sup>17</sup>TIA at 4.

Unfortunately, the Commission's "open market" proposal evades this statutory responsibility under Section 303(c) of the Act. Frequencies in the newly allocated 50 MHz would be assigned to various classes of stations, not by the Commission, but by the highest bidders.

The parties to this proceeding are not willing to let the Commission delegate its authority under Section 303(c) of the Act in this manner.<sup>18</sup> Relying on the auction process, instead of the rule making process, generally is considered to be what TIA characterizes as an "ill-defined licensing scheme."<sup>19</sup>

For example, MRFAC questions whether the Commission's proposal to allocate spectrum to the generic Fixed and Mobile categories will accomplish its goal of ensuring that the former federal spectrum would be put to the highest use.<sup>20</sup> It criticizes the Commission for taking the highly unprecedented step of stopping the allocation process before using rule makings to further specify the services to be accommodated within the subject band, thereby "rais[ing] fundamental questions as to whether the agency was fulfilling its statutory mandate to regulate the radio spectrum in the public interest."<sup>21</sup> Similarly, Metricom complains that the Commission misses the mark:

The allocation . . . to a new Fixed and Mobile Service would be an abdication of the agency's responsibility to determine service classes rather than a reasonable exercise of discretion under Section 303 because every conceivable service is included in the class of Fixed and Mobile Service. While the agency has considerable discretion to define classes, it obviously does not have authority to exercise this discretion by allocating spectrum to a service classification that covers every conceivable communications service since the duty to classify then would be meaningless.<sup>22</sup>

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<sup>18</sup>See, e.g., UTC at 3; TIA at 4-5; Motorola at 15; MRFAC at 4; FIT at 3; WINForum at 8; In-Flight at 3-6; Metricom at 10-13.

<sup>19</sup>TIA at 3.

<sup>20</sup>MRFAC at 3.

<sup>21</sup>MRFAC at 3.

<sup>22</sup>Metricom at 10-11 (footnote omitted).

Furthermore, as several parties point out, Congress has admonished the Commission that Section 303(c) of the Act mandates it "to award spectrum by making discrete allocations of spectrum as the public service requires."<sup>23</sup> By eliminating this step in assigning the federal spectrum, the Commission

has omitted a fundamental step in the allocation calculus: namely, a comparative evaluation of the public interest benefits provided by the various types of services that could be allocated in this spectrum. Without making a public interest analysis as among the competing uses of the spectrum, the Commission cannot fulfill its statutory mandate to determine whether its allocation decision will encourage the "larger and more effective use of radio in the public interest." The structure of the Commission's proposal permits no weighing of the public interest benefits of various services, leaving it instead to the "marketplace" to determine which services will develop in these bands.<sup>24</sup>

ANS, in its comments, chronicles the significant problems that equipment manufacturers would encounter if the Commission adopts its "open market" allocation approach. These problems include: (i) unleashing large numbers of incompatible operators in individual markets without adequate safeguards against harmful interference; (ii) increasing research and development costs caused by doubt over how the bands would be used and by the need to overcompensate in designing interference protection standards, in an uncontrolled environment, to address all such possible uses; (iii) creating uncertainty over potential market demand and related production and performance requirements because specific uses for the bands are not prescribed; and (iv) impeding the interoperability of devices domestically and internationally.<sup>25</sup> TIA, which represents manufacturers of the radios that would be used on the proposed fixed and mobile bands, agrees:

Indeed, instead of being able to rely on [a] global product market, manufacturers will not even be able to rely on a uniform domestic market, since there will be no

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<sup>23</sup>See e.g., In-Flight at 4-5, citing S. Rep. No. 301, 99th Cong. 2d Sess. 34 (May 15, 1986) (the Act prohibits the Commission from allowing different services to "compete for the same spectrum ...").

<sup>24</sup>UTC at 4 (footnote omitted).

<sup>25</sup>ANS at 2-5.



consistency to licensees' use of spectrum blocks across the country. Ultimately, inconsistent use of spectrum will impact the consumer by limiting the availability of new services, discouraging manufacturer research and development, raising the price of radio equipment, impeding interoperability, and restricting the potential for the deployment of innovative new technologies.<sup>26</sup>

In ET Docket No. 92-9, the Commission reallocated the 2 GHz band for emerging technologies, but this generic reallocation contemplated future rule makings to establish specific services and attendant technical specifications for these frequencies.<sup>27</sup> This scenario, regrettably, is rejected by the Commission in the NPRM. To avoid acting in an unlawfully arbitrary and capricious manner by ignoring its statutory responsibilities and the record of this proceeding, the Commission must follow the precedent in ET Docket No. 92-9, discard its proposal, and proceed with specific rule makings to determine how this 50 MHz will be allocated and assigned.

#### THE COMMISSION CANNOT USE AUCTIONS TO ALLOCATE SPECTRUM

Congress did not give the Commission carte blanche to auction spectrum. Instead, Congress specified clear guidelines for how auctions could be used and when they could be implemented.<sup>28</sup> Spectrum allocation and frequency assignment are not among the permitted uses for competitive bidding.<sup>29</sup> In the NPRM, however, the Commission ignores this prohibition and proposes using auctions to allocate spectrum and assign frequencies. This proposal also is denounced in the record.<sup>30</sup>

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<sup>26</sup>TIA at 10.

<sup>27</sup>First Report and Order and Third Notice of Proposed Rule Making, ET Docket No. 92-9, 7 FCC Rcd 6886, 6893 (1993). See also TIA at 3 n.5.

<sup>28</sup>47 USC Section 309(j)(6) (1994).

<sup>29</sup>47 USC Section 309(j)(7) (1994).

<sup>30</sup>See, e.g., ITA at 5-7; UTC at 6-9; API at 12-13; WINForum at 6-8; APCO at 2-3; Norand at 11-12; In-Flight at 5-6, 11; TIA at 3-6; Motorola at 15.

Under Section 309 of the Act, the Commission is prohibited from assigning a band of frequencies for licensed operations "on the expectation of Federal revenues from the use of a system of competitive bidding . . . ."<sup>31</sup> Moreover, the use of competitive bidding cannot substitute for the Commission's "obligation in the public interest to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means" to assign how specific frequencies are to be used.<sup>32</sup> In fact, the legislative history of OBRA includes a clear message from Congress that "auctions [cannot] be used to allocate frequencies among different service categories" and that "[f]requency allocation decisions must continue to be made by the FCC, not by the private marketplace."<sup>33</sup> Rather than complying with Congress' guidelines, the Commission, in the NPRM, unjustifiably stands the statutory authority to conduct competitive bidding on its head.

Several parties correctly assail the Commission for "evad[ing] these Congressional directives through auction of all of the 50 MHz at issue without regard to the potential use of the spectrum, as long as it is 'Fixed or Mobile.'"<sup>34</sup> For example, ITA describes the Commission's proposal as being "fatally flawed from both a legal and practical viewpoint."<sup>35</sup> It concludes that, "[w]ithout a proper assessment of the relative value of the different radio services that might be established on the bands under consideration," the Commission has "abdicat[ed]" its "responsibility under the

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<sup>31</sup>47 USC Section 309(j)(7)(A) (1994). See also ITA at 5-6; WINForum at 6; Motorola at 15; UTC at 7; Compaq at 13-15; TIA at 4.

<sup>32</sup>47 USC Section 309(j)(6)(E) (1994). See also TIA at 5; Motorola at 16; WINForum at 8.

<sup>33</sup>See FIT at 3, citing 139 Cong. Rec. S. 1438 (daily ed. Feb. 4, 1993) (Statement of Sen. Inouye). See also WINForum at 6; Norand at 12; TIA at 5-6.

<sup>34</sup>APCO at 4. See also ITA at 6; Norand at 12.

<sup>35</sup>ITA at 6.

Communications Act to allocate the use of the radio spectrum as required by the public convenience, interest and necessity."<sup>36</sup>

Many of these parties are quite worried that permitting auction winners to decide how the 50 MHz will be used increases the likelihood that commercial users will dominate and threatens the availability of essential public utility and public safety private services.<sup>37</sup> API declares that:

regardless of the fact that commercial providers may offer a broad array of voice and data communications services, they will not consistently meet the vital needs of private users who perform a series of widely varied and essential functions. Private users serve society in many ways, including energy production, transmission, and distribution; law enforcement; rail transportation; food processing; water treatment and delivery; and fire prevention services. The unique needs of private radio users for unrestricted priority access, security, unusually shaped geographic coverage areas, and high reliability will not be met by many conventional commercial providers.<sup>38</sup>

Collection of auction revenues for the reallocated 50 MHz is not a compelling reason to threaten the availability of such critical services.

Spectrum is scarce and Congress attempted to relieve some of the pressure by requiring reallocation of at least 200 MHz from the federal government to the private sector. This scarcity is recognized by the Commission in its initial report to the Department of Commerce on the proposed federal spectrum reallocation, as it urges the transfer of additional spectrum, especially in the 4 GHz band.<sup>39</sup>

The Commission's plan to auction the first 50 MHz is inconsistent with these goals. Based on the record, the Commission will keep this newly available spectrum from users which need it most

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<sup>36</sup>ITA at 6.

<sup>37</sup>See API at 12-17; ITA at 7-12; MRFAC at 5-8; FIT at 4-5; WINForum at 7; APCO at 3-4, 7-10; Motorola at 2-6, 15; AAR at 4-6; TIA at 6-8; UTC at 4-6.

<sup>38</sup>API at 15 (footnote omitted).

<sup>39</sup>Report from the Federal Communications Commission to Ronald H. Brown, Secretary, U.S. Department of Commerce. Regarding the Preliminary Spectrum Reallocation Report, FCC 94-213 (released Aug. 9, 1994) at paras. 49, 54, 67 and 76.

and which can provide the most public benefit. Such spectrum gerrymandering is exactly what Congress sought to avoid when it decided that auctions must not be used in lieu of sound spectrum management and assignment decisions. These decisions only can be reached in the rule making process.

#### **RULE MAKINGS ARE NEEDED TO DETERMINE USE OF THE 4 GHz BAND**

The private sector 4 GHz band currently is allocated, on a shared basis, for use by satellite and fixed point-to-point microwave users.<sup>40</sup> However, even though the Commission expects displaced 2 GHz fixed microwave users to move into the 4 GHz band, it refused to re-channelize these frequencies to make co-habitation with the satellite carriers feasible.<sup>41</sup> Thus, the Commission's statement in the NPRM, that it adequately addressed the spectrum needs of the 2 GHz fixed microwave users in ET Docket No. 92-9,<sup>42</sup> is wrong. To remedy this spectrum shortage, ANS, in its comments, proposes that the Commission work "with NTIA for the allocation of more spectrum, at one time, in the 4 GHz band to accommodate fixed users."<sup>43</sup>

Not surprisingly, ANS is joined by other parties in seeking allocation of spectrum for fixed microwave users in the 4 GHz band. API states that "the Commission has made no satisfactory arrangements for low density, long haul microwave requirements" now met in the 2 GHz band allocated for emerging technologies, and it argues that the "4660-4685 MHz band appears to be capable of channelization in a manner satisfactory to serve as adequate replacement spectrum" for such use.<sup>44</sup> Pacific Bell concurs.<sup>45</sup>

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<sup>40</sup>47 C.F.R. Section 2.106 (1994).

<sup>41</sup>Second Report and Order, ET Docket No. 92-9, 8 FCC Rcd 6495, 6500 (1993).

<sup>42</sup>NPRM at para. 22.

<sup>43</sup>ANS at 2.

<sup>44</sup>API at 9.

<sup>45</sup>Pacific Bell at 2.

Other uses for the 4 GHz band also are advocated. The Joint Broadcasters want this spectrum for Advanced Television and auxiliary broadcast uses;<sup>46</sup> LPQ wants the band for MSS feeder links;<sup>47</sup> and two wireless cable interests want the spectrum for their technology.<sup>48</sup> Apple proposes that the entire 50 MHz be reallocated as part of a comprehensive frequency plan.<sup>49</sup>

For the reasons described above, under the Commission's "open market" approach, it is highly problematic that any of these uses could be accommodated. Absent band sharing and interference protection criteria that are precise and consistent throughout the country, users in these and other services will spend more time dueling with each other over access to the newly available frequencies than they would if rule makings establish how these channels will be divided among different services. Under these circumstances, the Commission has no choice but to conduct rule makings so that the relative merits of the potential services, including the needs of fixed microwave users on the 4 GHz band, can be evaluated. Appropriate services then could be assigned frequencies and could be subjected to necessary technical and operating requirements that maximize their usefulness.

### CONCLUSION

Congress has bestowed a gift of 200 MHz on the private sector. To ensure that this spectrum serves the public interest, the Commission must take a deep breath and re-think its proposed generic, "open market" frequency plan.

If the proposed "allocation" plan is adopted, the public interest will be undermined. New services and products will be unavailable. Manufacturers, held hostage by the uncertainty over how the bands will be used and by the absence of specific interference protection and operating standards,

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<sup>46</sup>Joint Broadcasters at 5-10.

<sup>47</sup>LPQ at 5-6.

<sup>48</sup>WCAI at 3; ATI at 4-7.

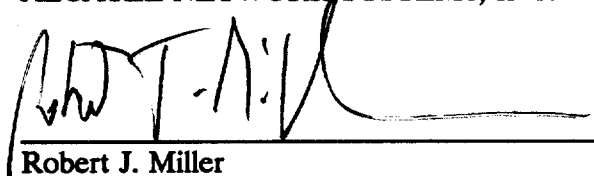
<sup>49</sup>Apple at 1.

will forego significant research and development investment. Providers of critical public service and safety communications will be forced out of the new spectrum by the bidding and by the inability of commercial licensees to meet their needs.

Ignoring the rule making process to allocate and assign the 50 MHz identified in the NPRM will not work. Using the rule making process to pursue a comprehensive allocation plan, as Apple recommends, instead of the piecemeal, haphazard approach set out in the NPRM, will work. This rule making process has been the most effective tool for determining what services should be assigned to specific frequencies and how the services should be provided. The record of this proceeding obliges the Commission to jettison its "open market" approach and commence rule making proceedings to allocate and assign both the newly available initial 50 MHz and the remaining 150 MHz.

Respectfully submitted,

ALCATEL NETWORK SYSTEMS, INC.

A handwritten signature in black ink, appearing to read 'R. J. Miller', is written over a horizontal line.

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January 5, 1995

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## **APPENDIX A**

**Amateur Television Network ("ATN")**

**American Petroleum Institute ("API")**

**American Telecasting, Inc. ("ATT")**

**Apple Computer, Inc. ("Apple")**

**The Association of American Railroads ("AAR")**

**Association for Maximum Service Television, Inc. and Other Major Television Broadcasting Entities ("Joint Broadcasters")**

**Association of Public-Safety Communications Officials-International, Inc. ("APCO")**

**AT&T Corp. ("AT&T")**

**Compaq Computer Corporation ("Compaq")**

**Continental Airlines ("Continental")**

**Forest Industries Telecommunications ("FIT")**

**In-Flight Phone Corporation ("In-Flight")**

**Industrial Telecommunications Association, Inc. ("ITA")**

**Loral/Qualcomm Partnership, L.P. ("LQP")**

**Los Angeles County Sheriff's Department ("LA Sheriff")**

**Manufacturers Radio Frequency Advisory Committee, Inc. ("MRFAC")**

**Metricom, Inc. ("Metricom")**

**The Mobile and Personal Communications Division and Fixed Point-to-Point Microwave Section of the Telecommunications Industry Association ("TIA")**

**Motorola, Inc. ("Motorola")**

**Norand Corporation ("Norand")**

**Pacific Bell Mobile Services ("Pacific Bell")**

**UTC, The Telecommunications Association ("UTC")**

**The Wireless Cable Association International, Inc. ("WCAI")**

**Wireless Information Networks Forum, Inc. ("WINForum")**

### **CERTIFICATE OF SERVICE**

I do hereby certify that a true and correct copy of the foregoing Reply Comments will be mailed via first class mail, postage prepaid, to the following parties on the 5th day of January, 1995.

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January 5, 1995

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